

**IMPACT OF ONLINE COMMUNITY ON E-LEARNERS'
INTENTION TO STAY IN THEIR PROGRAMMES
AT OPEN UNIVERSITY MALAYSIA**

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ABSTRACT

The objective of this research is to investigate the impact of Online Community on learners' intention to stay in their programmes at Open University Malaysia. The intensity of the Online Community is measured using four variables: Learner-Learner, Learner-Tutor, Learner-Staff and Learner-Content interaction. The level of interaction in the Online Community has two ends of the continuum. The lower end of the continuum happens when the level of interaction is low which leads to the feelings of isolation. The higher end of the continuum is the result of a higher level of interaction in the Online Community, which leads to Engagement of learners. The Engagement of learners, mediated by Sense of Community, Satisfaction and Intrinsic Motivation, was hypothesised to influence learners' Commitment to stay in their programmes. Data for the research were collected from 1550 undergraduate learners of Open University Malaysia located throughout Malaysia using self-administered questionnaires. Results from 1116 respondents showed that there was a correlation between Learner-Learner, Learner-Tutor, Learner-Staff, Learner-Content and Engagement. Multiple regression analysis carried out on Engagement, Sense of Community, Satisfaction and Intrinsic Motivation showed that Engagement, Sense of Community, Satisfaction and Intrinsic Motivation have an impact on Commitment to stay. The research also found that Engagement, Sense of Community, Satisfaction and Intrinsic Motivation explain 71 percent of the variance of Commitment to stay.

Keywords: Online Community, Engagement, Feelings of Isolation

**IMPAK KOMUNITI ATAS TALIAN TERHADAP NIAT PELAJAR UNTUK
TERUS KEKAL DALAM PROGRAM MEREKA DI
UNIVERSITI TERBUKA MALAYSIA**

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Oktober 2010

ABSTRAK

Tujuan kaji selidik ini adalah untuk menyelidik impak Komuniti Atas Talian terhadap niat pelajar untuk terus kekal dalam program mereka di Universiti Terbuka Malaysia. Keamatan Komuniti Atas Talian diukur dengan menggunakan empat pemboleh ubah: Interaksi Pelajar-Pelajar, Pelajar-Tutor, Pelajar-Staf, dan Pelajar-Kandungan. Tahap interaksi dalam Komuniti Atas Talian mempunyai dua kontinum hujung. Kontinum hujung yang lebih rendah berlaku apabila tahap interaksi adalah rendah, mengarah kepada perasaan pengasingan. Kontinum hujung yang lebih tinggi adalah hasil tahap interaksi yang tinggi dalam Komuniti Atas Talian, mengarah kepada Keterlibatan pelajar-pelajar. Keterlibatan pelajar melalui perantaraan Perasaan Komuniti, Kepuasan dan Motivasi Intrinsik telah dihipotesiskan untuk mempengaruhi Komitmen pelajar-pelajar untuk terus kekal dalam program mereka. Data untuk kaji selidik ini telah diperolehi daripada 1550 orang mahasiswa-mahasiswi Universiti Terbuka Malaysia di seluruh Malaysia dengan menggunakan borang soal selidik. Keputusan daripada 1116 responden menunjukkan bahawa terdapat satu hubungan antara Interaksi Pelajar-Pelajar, Pelajar-Tutor, Pelajar-Staf, Pelajar-Kandungan dengan Keterlibatan. Analisis regresi berganda yang dijalankan ke atas Keterlibatan, Perasaan Komuniti, Kepuasan dan Motivasi Intrinsik menunjukkan bahawa Keterlibatan, Perasaan Komuniti, Kepuasan dan Motivasi Intrinsik mempunyai impak terhadap Komitmen Untuk Terus Kekal. Kaji selidik juga mendapati bahawa Keterlibatan, Perasaan Komuniti, Kepuasan dan Motivasi Intrinsik menjelaskan 71 peratus varians Komitmen Untuk terus kekal.

Kata Kunci: Komuniti Atas Talian, Keterlibatan, Perasaan Pengasingan

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CHAPTER 1

INTRODUCTION

1.1 Background

Distance education for tertiary education in Malaysia is at a growing stage compared with many other countries especially in the US and UK. The first distance education programme in Malaysia was established in 1971 by University Sains Malaysia, specially catering for working adults. Back then it was offered as an off-campus programme where learners will be provided with printed learning materials guided by a learning schedule. Learners need to attend on-campus learning for a specific period of time in a year. The success of University Sains Malaysia has prompted many other public universities in Malaysia such as Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Universiti Teknologi Malaysia and Universiti Teknologi Mara to offer their programmes to working adults via distance education mode. Many private traditional universities are also offering various degree programmes to working adults via night class or weekend class.

With the advent of Information and Communication Technology in the early 1990s, more and more educational institutions both public and private have capitalised on the Internet to offer programmes using the distance education mode with online access. Universiti Tun Abdul Razak was the first private university in Malaysia given approval in 1998 to conduct its courses via online as part of the larger national agenda to liberalise and democratise education in the country (Syed & Hasnan, 2006).

The quest for distance education in Malaysia continues with the setting up of three more local education providers:

- a) In 2000, the Malaysian Ministry of Higher Education has approved the setting up of Open University Malaysia as the seventh private university and the first open and distance learning institution in Malaysia. Its objective is to offer various tertiary programmes mainly for working adults in line with the government's objective of producing at least 40 percent of the population to have a basic degree by the Year 2010.
- b) In 2006, the not-for-profit Wawasan Open University was established to offer similar mode of learning to working adults as Open University Malaysia.
- c) In 2007, the Ministry of Higher Education Malaysia has also given approval to the setting up of another open distance learning higher education institution, the Asia e-University with funding from the government of 30 countries.

According to Nawawi, Asmuni and Romiszowski (2003), among the key factors that drive the development of virtual and distance education in Malaysia include demand for skilled workforce and professionals who are conversant in information technology, advent of Information and Communication Technology in providing flexibility in education application, engagement in lifelong learning and demand for equitable access to educational opportunities from remote students especially working adults.

As a result, according to the Ministry of Higher Education 2008 Statistic, 18 of the 20 public universities in Malaysia offer their courses on a part time mode where students come to class after work or during weekends where they were supported with Internet such as web portal, online forum and dedicated email country wide. The total enrolment for part time students at these universities was reported to have reached 50000. The four open and distance learning private higher institutions; Open University Malaysia, University Tun Abdul Razak, Wawasan Open University, and Asia e-University, have a total enrolment exceeding 100000 in 2008. Open University Malaysia made up the highest number with accumulated enrolment of 67,614 (including those who have graduated) since 2001 (Ali & Bahroom, 2008). Thus, this shows that the demand for tertiary education through distance learning mode in Malaysia has increased.

The increase in enrolment was in line with the aspiration of the government as outlined, both in the Ministry of Education 2001-2010 Education Development Plan and Private Higher Institution Strategic Plan 2001-2010 which formed part of the human capital development under the Ninth Malaysia Plan (2006 - 2010). Hereby the

government intended to provide more opportunities and greater access to quality education and training by promoting distance education and lifelong learning so as to achieve the target of 40 percent participation rate by 2010.

According to Nawawi, Asmuni and Romiszowski (2003), the government had targeted an enrolment of 60000 students for distance learning from among working adults to improve their knowledge and skills. The Ninth Malaysia Plan is the first part of three five-year blueprints under the National Mission towards achieving the status of a developed nation by 2020 in creating more avenues for skills development, training and lifelong learning for the workforce at all levels and ages. The government has increased its allocation for education to RM45.1 billion from RM42.3 billion under 8MP. This represents a 23 percent of the total budget. Out of this, RM16.1 billion has been allocated especially for the development of tertiary education (Economic Planning Unit, 2006).

The government has also allocated RM12.9 billion under Ninth Malaysia Plan to improve on the infrastructure for Information Communication Technology related usage. According to Economics Planning Unit (2006), the penetration rate for personal computers has increased from 1.2 percent in 1990 to 21.8 percent in 2005. The penetration rate for Internet dial-up and broadband in 2005 was 13.9 percent and 1.9 percent respectively. The government will continue to promote lifelong learning and e-learning with the increased digitisation of the economy by targeting the personal computers penetration rate at 40 percent and Internet broadband penetration of 50 percent by 2020.

Under the same Ninth Malaysia Plan, University Tun Abdul Razak and Open University Malaysia have been explicitly mentioned to help the government to increase access to tertiary education by developing more programmes suitable for the needs of the market. The Flexible Entry (formerly known as Open Entry) system was developed and approved by the Ministry of Higher Education through the Malaysian Qualifying Agency meaning that working adults with a minimum of Lower Certificate of Examination will be allowed to enrol in a tertiary programme provided they passed the Flexible Entry test. This system has been widely adopted by established universities such as the Open University of United Kingdom. With the Flexible Entry system, the government hopes to liberalise and democratise education further by making education accessible to all.

While it is good that more and more people are given the opportunity to have access to tertiary education, and universities, both public and private, are encouraged to enrol more students, emphasis must also be given on the issue of retention of students and completion of their studies. The Information Communication Technology especially Internet has provided flexibility for students to study at their own pace, time and space and allows institutions of higher learning to take in more learners without the barrier of physical space. However, technology also has its setback. A study on learner's acceptance on e-learning in Malaysia by Lim, Hong and Tan (2008) revealed that learners' acceptance is moderate and more could be done to help increase their level of acceptance. A high attrition rate will affect the institution's income and damage its image in terms of academic and service quality.

Education industry today is a big business in Malaysia as well as worldwide. In almost all businesses, the company's most valuable asset is their loyal customers. According to Sindell (2000), new customers are increasingly difficult to acquire due to competition. Good customer service can lead to customer satisfaction. However, satisfied customers may even defect to other companies. Satisfaction measures do not tell us much except that they are more likely to be loyal (Gamble, 2005). Hence, it takes more than good customer service and efficiency to retain customers. According to Jones and Sasser (1995), customer satisfaction is affected by four elements, which include good products or services, basic support service, counteracting bad customer experience and extraordinary services.

In Malaysia more private and public universities have been set up during the last decade to cater for the increased demand for better knowledge, qualification, and job prospects. According to the statistics from the Ministry of Higher Education (2007) website (www.mohe.gov.my), there are currently 20 public universities and 37 private universities and university colleges in Malaysia. With the advent of technology especially the Internet, the open and distance education industry is growing beyond national borders. The intense competition within the industry has forced these education providers to focus not only on providing quality academic programmes, but also to meet the high demand of their customers (Khoo & Rozhan, 2003).

According to Stewart (1999), the success of distance education providers is guided by dropout, wastage or attrition rate. Many researches have been carried out to find out what causes attrition and many models have been developed to explain such causes. Widely referred models on attrition include Tinto's (1975, 1987 & 1993) model, Bean

and Metzner's (1985) model and Kember's (1995) model. Nevertheless, attrition rate remains high because these models are more of a causal-effect than action plan. The issues of overcoming learners' feeling of isolation (Palooff & Pratt, 1999; Reisman, 2003), which is one of the main contributing factors of attrition especially in non-traditional universities, have not been addressed. DeVries and Wheeler (1996) noted that the major hurdle of distance education faced by learners is the lack of face-to-face contact and the feelings of isolation.

Tait (1995), Mullen (2005), and Latif and Fadzil (2007) pointed out that the provision of learner support has been widely and increasingly recognised as an essential component of any open and distance learning system. Huge amount of money has been spent to develop various support tools such as the Learning Management System with the hope of making the programmes offered more cost effective and create a competitive advantage while providing learning support.

The Learning Management System tool which was meant to provide learners with learning support can help increase learner-learner, learner-tutor and learner-management interaction, can engage learners to overcome loneliness and remoteness among distance learners. It can also be used to provide various support services. Interaction among the different players in the Learning Management System over a period of time can form an online community.

According to Hill (1999), community building can occur in distance delivered courses much like community building can occur in virtual teams in the business sector. Online community has been used successfully by AOL, WELL, nikeplus.com,

Americanidol.com, Google and Yahoo to acquire and retain customers. The many social networking tools such as Facebook, MySpace, blogs and twitter that have emerged in recent years have also applied the same concept to attract and retain their visitors. Such online communities have made their customers perceived that they have a role to play in the community. Thus they are motivated to return frequently. According to Gamble (2005), customers form opinion about an organisation through a series of cumulative experience when they come into contact with the products, services and community that align to their expectations to create loyalty, advocacy and attraction.

1.2 Open University Malaysia and Online Community

Open University Malaysia, Malaysia's first open and distance learning institution, started its operation in 2001. Today it has grown by the leaps and bounds and has emerged as the largest private university in Malaysia with enrolment exceeding 85000 students (Latif, Sungsi & Bahroom, 2009). As an open and distance learning institution it is also faced with attrition problems. Many efforts have been taken to address these problems in order to ensure that it achieves its target of becoming a mega university by 2010.

According to Ali (2008), up-to-date and well-equipped Information and Communication Technology infrastructure is the key for open and distance learning operation. This infrastructure must also be enhanced and improved to correspond to ever-evolving technologies. Online learning forms part of a blended learning mode used at Open University Malaysia, which is delivered via its Learning Management

System. He added that e-content development, which is one of the six innovative Information and Communication Technology efforts of Open University Malaysia, has started in 2007 in order to enhance the open and distance learning teaching and learning experience with interactive, engaging and effective e-learning materials. (Ali, 2008).

The online discussion forum implemented in 2003 is available in the Learning Management System, which provides the opportunity for learners to participate and collaborate with other learners. Learners can interact with other learners and their tutors on a 24/7 basis and thus encourage better communication. Tutors can also use this feature to provide feedbacks to their learners, which many of the learners are expecting. According to Abas and Fadzil (2009), online discussion forum has the potential to add value to the total learning environment in open and distance learning. Research conducted by Kaur (2004) on online discussion forum at Open University Malaysia confirmed that learners are generally satisfied with the context, feedback, and interaction with their peers and tutors. However, Abas and Fadzil (2009) in their research on online discussion forum using the Community of Inquiry instrument found that the quality of interactions differs from tutor to tutor. They added that those found to be effective have succeeded in creating a warm social environment encouraging their learners to participate actively.

As Palloff and Pratt (1999) and Reisman (2003) pointed out that one of the reasons learners quit their programmes is the feelings of isolation. This can be overcome if learners are engaged with other learners and also with their tutors and management staff. At Open University Malaysia, the Learning Management System provides a

means for learners to communicate with the management staff of Open University Malaysia and vice versa via several ways which include Gmail, Learning Management System Announcement System, E-Customer Relations Management, E-Services and Online Community (See Figure 1.1 and Appendix M).

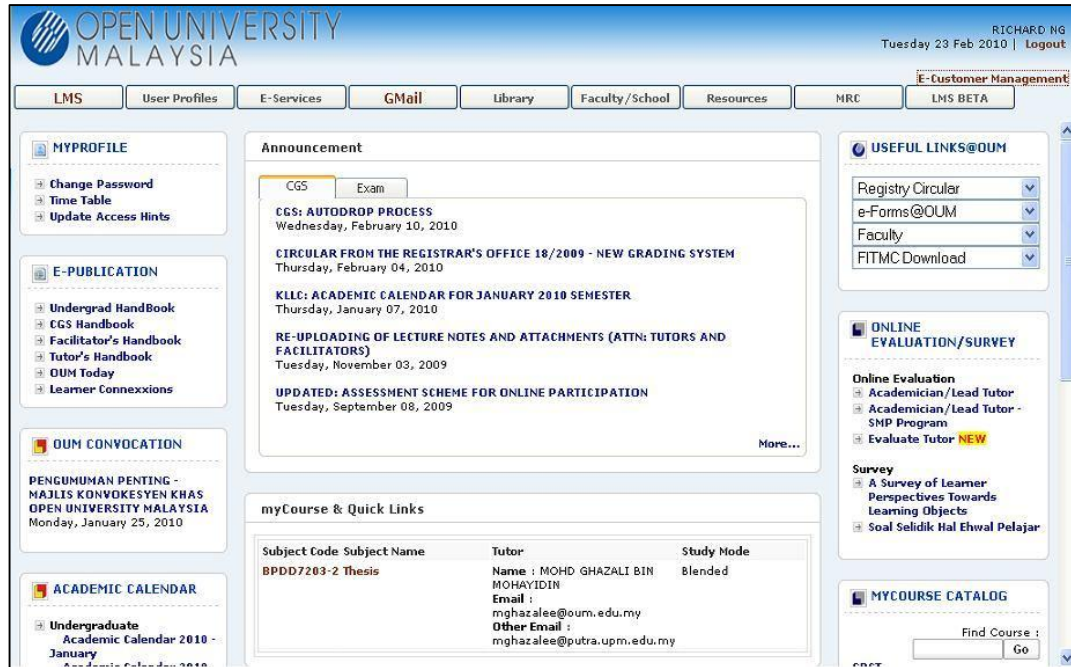


Figure 1.1: The Learning Management System of Open University Malaysia

Learners communicate with their tutors via Online Discussion forum, Gmail and Online Community. The management staffs communicate with the faculty members via Gmail as well as Tutor Announcement. There is also the Learner Connexion in the Learning Management System which is an online monthly bulletin that contains articles written for learners by learners. Academic faculties and tutors too have their monthly bulletin known as Tutor Connexion to keep tutors informed of the latest in university. Most learners and tutors in an open and distance learning environment are

remote from each other and from the university thus most communications are carried out via telephone or the above mode of communication.

Retention of learners is one of the critical issues at Open University Malaysia. As with other universities, Open University Malaysia is also actively looking into ways to manage the factors that have caused attrition. It has set up the Institute of Quality, Research and Innovation for this purpose. Among the efforts recommended include:

- a) making it compulsory for new students to attend the Learning Skills workshop
- b) conduct pre-tutorial mathematics workshop for students taking mathematics subjects
- c) organise exam workshops for students before they sit for their final exams
- d) set up the Math Resource Centre to help provide its learners with various resources to improve their Math
- e) introduce Collaborative Online Learning
- f) introduce mobile learning to alert its learners with new information available in the Learning Management System
- g) set up counselling unit to provide counselling to At-Risk learners
- h) make learners' satisfaction and Cumulative Grade Point Average as part of Key Performance Indicators for support centres

Apart from mobile learning, the usage of Web 2.0 has also been adopted through the use of social network tool such as Facebook, Blogs, YouTube and Twitter to engage the learners. The objective is to alert learners and also to support mobile learning especially with the decrease in the price of communication tools such as Smart

Phones and I-Pods. According to Figallo (1998), the interactive community component can win loyalty and 'fanhood' and even attract new business if company's expertise and personality are extended into the Web.

The Centre for Student Management of Open University Malaysia has also taken proactive approach by setting up the Learners Services Centre and Customer Retention Management tracking system to assist learners with administrative and personal problems. It has also set up a Counselling Unit to provide counselling and help organise activities to assist students who are classified as At-Risk (those with Cumulative Grade Point Average below 2.0).

Open University Malaysia has done so much in order to reduce attrition among its learners. Retention efforts are being taken by Open University Malaysia by providing quality education, quality support services, and quality infrastructure and quality technology (Latif & Fadzil, 2007). As learners of Open University Malaysia are remote to each other, their tutors and management staff, the communication system which forms part of the Learning Management System need to be managed well to get learners to be engaged to the system. According to Latif, Sungsri and Bahroom (2009), Open University Malaysia has an attrition rate ranges from 12.5% (semester to semester basis calculation) to 42.5% (cumulative attrition since 2001) and varies from one faculty to another faculty. However, the contentious issue here is that the number of learners quitting Open University Malaysia each year is on the rise and in tandem with the increase in its enrolment. Though the attrition rate looks manageable, the number of learners quitting their programmes is quite high.

Figure 1.2 shows the trend of learners quitting Open University Malaysia as extracted from Open University Malaysia's Balance Score Card and Management Information System. Attrition rate reported by Open University Malaysia extracted from its Management Information System is shown in Figure 1.3 below:

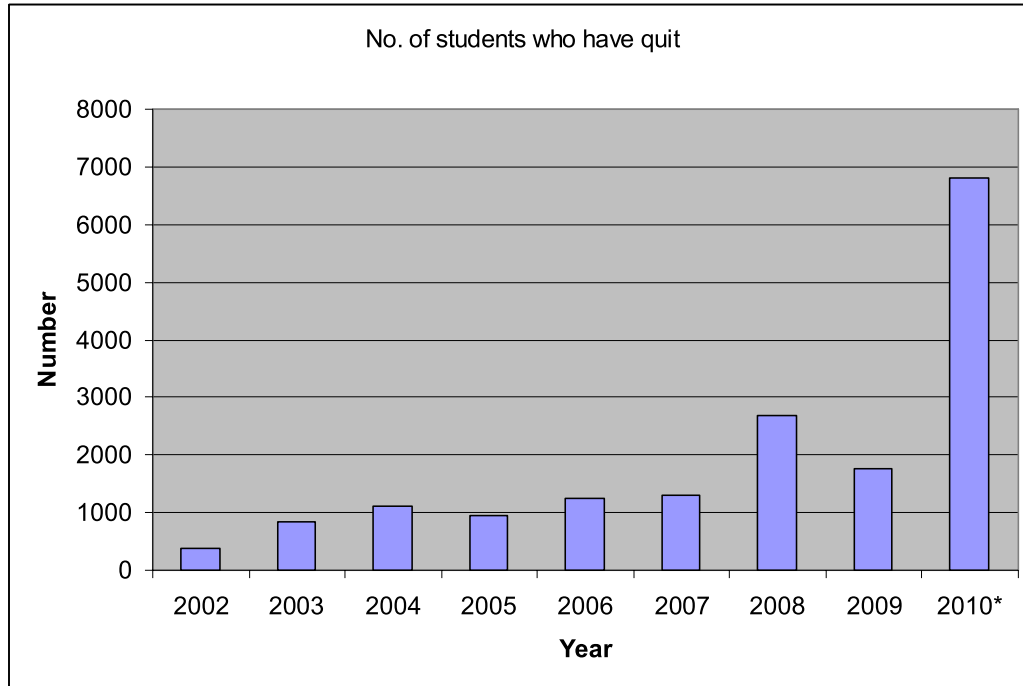


Figure 1.2: Number of learners who have quit Open University Malaysia from 2002 to 2010*.

*Note: 2010 involves data collected for the first three months.

Despite the many retention efforts taken by Open University Malaysia and the heavy investment on setting up the Learning Management System to support learning, the number Open University Malaysia learners quitting their programmes each year is quite alarming. The attrition rate seems to have improved since 2002 (13.8 percent) until 2007 (4.1 percent) and then experience a slight increase in 2008 (7.2 percent),

dropped to 4.5 percent in 2009 and increased to 17.4 percent in 2010 (See Figure 1.3).

Note that the 2010 data is captured for the first three months of the year.

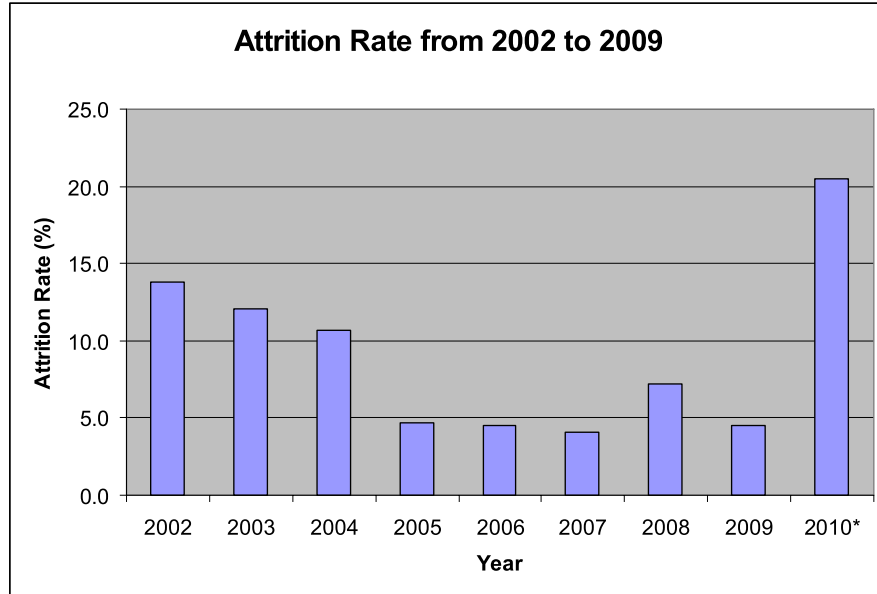


Figure 1.3: Attrition rate from 2002 to 2009.

Note: 2010 is for the first quarter period only. Source: Open University Malaysia's Management Information System

1.3 Problem Statement

Even though the attrition rate experienced by Open University Malaysia looks much better at an average of about 5 percent compared to other non traditional universities, this rate when multiplied by the total enrolment each year can be very huge and alarming. Open University Malaysia should not be misled by such a low attrition rate. The trend of learners that have quit their programmes since 2002 as shown in Figure 1.2 and Table 1.1 respectively should serve as a warning especially during a time where the cost of recruitment is high and competition is getting tougher.

In 2002 for instance, there are 383 learners who have quit their programmes. In 2008 and 2009 respectively 2675 and 1765 learners have quit their programmes. Based on the assumption that each learner quit after studying for two years of a four-year degree programme then this works out to a loss of about RM10000 in potential revenue to Open University Malaysia per learner. A four-year degree at Open University Malaysia costs an average of RM20000. That means in 2008, Open University Malaysia potential loss in earning was RM26.8 million. In 2009 its potential loss in earning was about RM17.7 million (See Table 1.1).

Table 1.1: Statistics for Attrition and Projected Revenue lost of Open University Malaysia. Source: Open University Malaysia's Management Information System.

Note: 2010* data is based on first quarter report.

Year	No. Quit	Active Learners	Attrition Rate (%)	Revenue Lost
2002	383	2780	13.8	3,830,000
2003	831	6843	12.1	8,310,000
2004	1102	10335	10.7	11,020,000
2005	936	20000	4.7	9,360,000
2006	1250	28000	4.5	12,500,000
2007	1300	32000	4.1	13,000,000
2008	2675	37149	7.2	26,750,000
2009	1765	39218	4.5	17,650,000

In short, from 2002 to 2009 a total of about 10000 learners have quit studying at Open University Malaysia. Hence, if this number is multiplied by RM10000, then the amount of potential loss of revenue to Open University Malaysia is about RM100 million. Hence, the retention efforts taken by Open University Malaysia have not managed to reduce the number of learners from quitting their programmes each year.

Thus this study was proposed to look at how the Learning Management System can be used to engage learners and develop an Online Community. Based on literature review in Chapter 2, increased in participation of learners, tutors and management in the Online Community will help increase the Engagement of learners and their level of Sense of Community, Satisfaction, Intrinsic Motivation and Commitment to stay. This will be explained in detail in Chapter 2. Higher level of Engagement can help reduce the learners' feelings of isolation. The underlying factor of feelings of isolation as an open and distance learners need serious focus as pointed out by Palloff and Pratt (1999), Reisman (2003) and Rovai et al. (2007).

1.4 Objective of the Study

The objective of this study was to investigate the impact of Online Community, which is formed as a result of the learners' continuous use and involvement in the Learning Management System, on the learners' intention to stay in their programmes at Open University Malaysia.

The independent variable, Engagement, was the result of the participation of learners in the Online Community. This variable was hypothesised to have impact on learners' intention to stay as shown in See Figure 1.4. The intensity of the Online Community is measured using four predictors; Learner-Learner, Learner-Tutor and Learner-Content Interactions as proposed by Moore (1989) and an additional predictor; Learner-Staff interaction as proposed by Jiang (2008). These predictors were assumed to have impact on the criterion variable; Engagement (See Figure 1.5). A higher level of interaction will lead to higher level of Engagement whereas a lower level of

interaction will lead to lower level of Engagement (Jiang, 2008). Lower level of Engagement very often leads to feelings of isolation.



Figure 1.4: Relationship between learners' Engagement and their Commitment stay

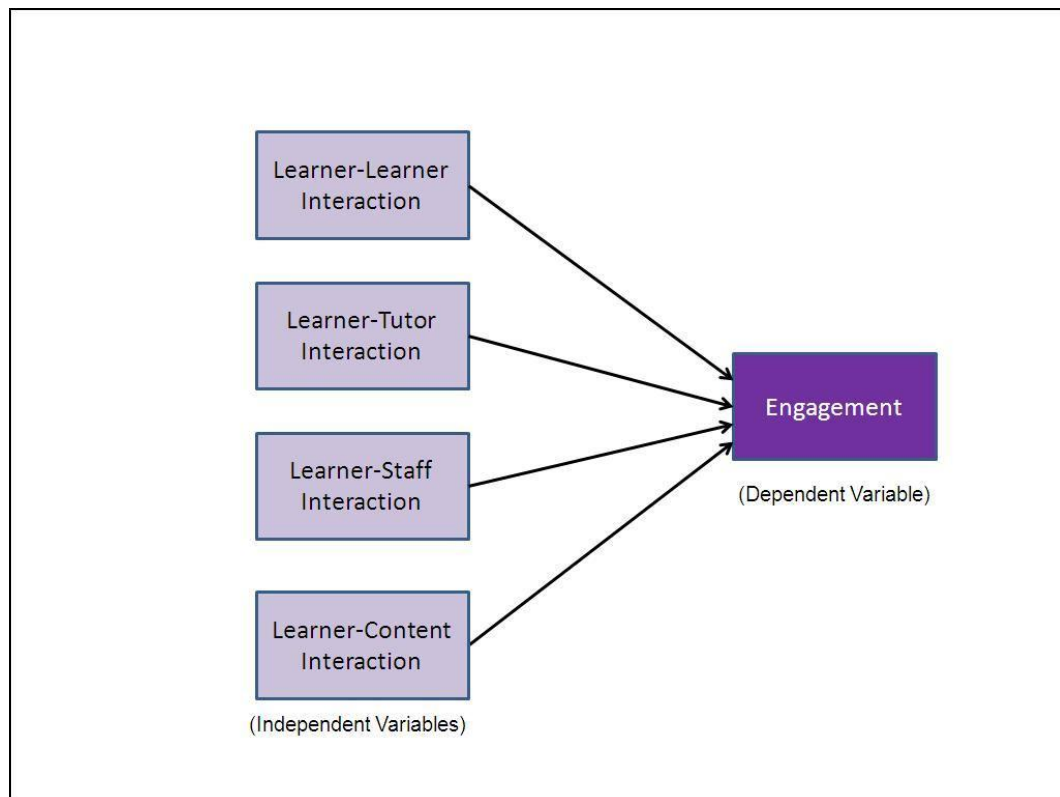


Figure 1.5: Predictors of learners' Engagement

Engagement, mediated by Sense of Community, Satisfaction and Intrinsic Motivation, is hypothesised to have an impact on the learners' Commitment to stay (dependent

variable) in their programmes. This will be explained in detail in Chapter 2 under sub-topic 2.6 and 2.9.

The triggering of participation in the Online Community; Learner-Learner, Learner-Tutor, Learner-Content and Learner-Staff, can help learners to be engaged and help to reduce their feelings of isolation and increase their connectedness.

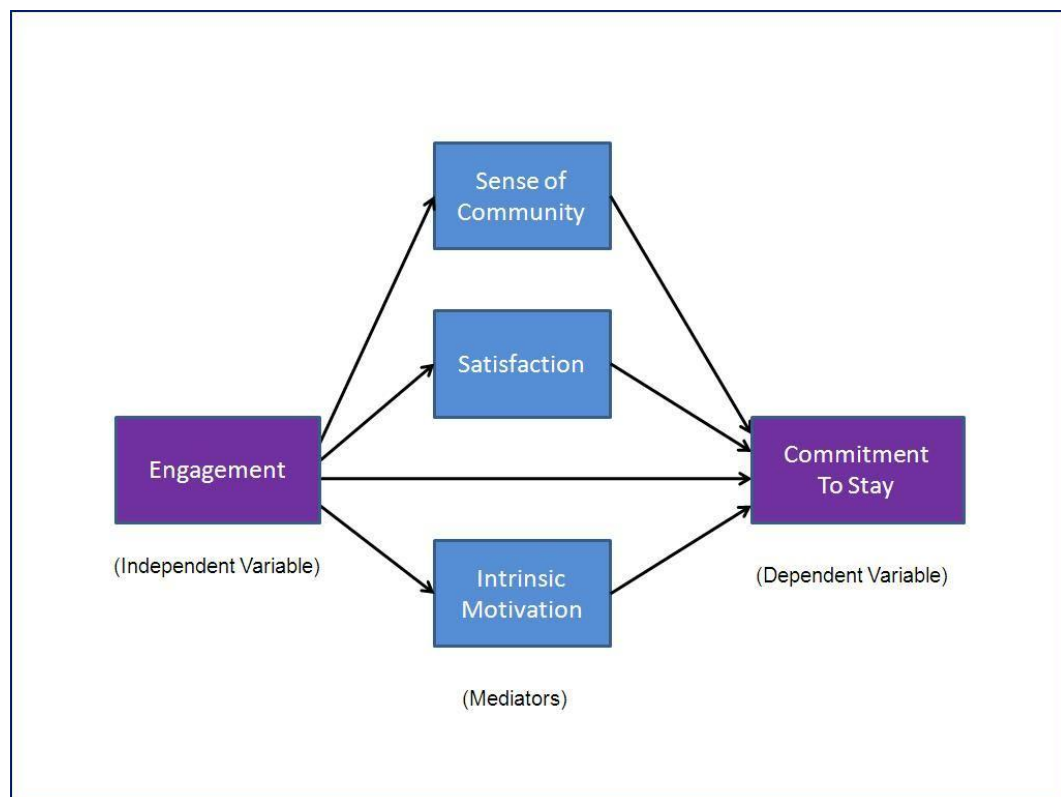


Figure 1.6: Conceptual model of the research

Open University Malaysia was chosen for the research setting as it has one of the most well developed Learning Management Systems, it practices blended learning mode and it uses the Learning Management System as the fulcrum in providing learning and services support. Figure 1.6 shows the conceptual model of the research. This conceptual model assumes that a lower level of Engagement as a result of

feelings of isolation and lower level of interaction between learner-learner, learner-tutor, learner-staff and learner-content, will lead to a lower level of Commitment to stay whereas higher level of Engagement will lead to higher level of Sense of Community, Satisfaction, Intrinsic Motivation and Commitment to stay.

1.5 Research Questions

Six questions have been developed to guide the study as follows:

1.5.1 Research Question 1

What is the level of interaction between Learner-Learner, Learner-Tutor, Learner-Content and Learner-Staff and do they have impact on learners' Engagement?

This question was developed to seek answers for the level of interaction between learners and their fellow learners, tutors, management staff and the content available in the Learning Management System. It was hypothesised that the higher the level of Learner-Learner, Learner-Tutor, Learner-Content and Learner-Staff interaction in the Online Community, the higher the level of Engagement in the Online Community.

1.5.2 Research Question 2

Do learners' demographic variables such as Gender, Ethnicity, Age Group, Marital Status, Work Status, Method of Financing, Current Academic Year and At-Risk Status have impact on learners' Engagement?

The purpose of this question was to find out if other variables such as the demographic variables have impact on the learners' Engagement. It was hypothesised that these variables have no impact on the learner's Engagement.

1.5.3 Research Question 3

Is there a correlation between Engagement and Sense of Community, Satisfaction, Intrinsic Motivation, and Commitment to stay?

The answers to this question will help us determine if Engagement has any relationship with Sense of Community, Satisfaction, Intrinsic Motivation, and Commitment to stay. If there is, then the degree of impact can be found by using Multiple Regression Analysis.

1.5.4 Research Question 4

Are the mean scores of Sense of Community, Satisfaction, Intrinsic Motivation, and Commitment to stay of learners higher for those who are perceived to have higher Engagement compared with those who are not?

This question seeks to find out if learners with mean score above 3.51 as proposed by Jiang (2008), of Engagement, also have high mean scores of Sense of Community, Satisfaction, Intrinsic Motivation, and Commitment to stay. If yes, then Engagement has an impact on these variables.

1.5.5 Research Question 5

Are the mean scores of Sense of Community, Satisfaction, and Intrinsic Motivation of learners higher for those who are committed to stay compared with those who are not? This question will help to explain if Sense of Community, Satisfaction, and Intrinsic Motivation have impact on Commitment to stay.

1.5.6 Research Question 6

Do Sense of Community, Satisfaction and Intrinsic Motivation act as mediators for Engagement on Commitment to stay?

This question will seek to find out if Sense of Community, Satisfaction and Intrinsic Motivation act as mediators between Engagement and Commitment to stay.

1.6 Significance of the Study

The study of attrition has been one of the most frequently conducted researches over the last 30 years. Review of the literatures on attrition revealed that the earliest model on attrition was developed by William Spady in 1971 based on the Suicidal Theory by a French Professor and Psychologist Emile Durkheim. The study was then adopted and made popular by Vincent Tinto in 1975 and later revised in 1987 and 1993. Tinto's (1975, 1987 & 1993) model of Academic and Social Integration however, was based on traditional students setting. Bean and Metzner came out with the

Psychological Model of Student Departure in 1987 based on non-traditional student settings.

Feelings of isolation have been identified as one of the factors that have caused attrition among learners from non-traditional universities by many researchers. Widely cited researchers that have proposed this factor include Palloff and Pratt (1999), Reisman (2003), Murray (2001), Morgan and Tam (1999), Keegan (1993), and Dueber and Misanchuk (2001). According to Thompson (1990), sense of isolation contributes to low motivation, instructional ineffectiveness, poor academic achievement, negative attitudes, overall dissatisfaction with the learning experience and high attrition rates.

There is not many research done to study the impact of Online Community on e-learners' intention to stay to date. In fact this is the first time such research is carried out to correlate interaction of learners in the Online Community and their intention to stay in their programmes. Thus this research can contribute to the body of knowledge significantly in several ways:

1.6.1 In terms of Significant to Open University Malaysia

This research was based on undergraduate learners of Open University Malaysia. As such the data collected reflected and analysed will provide Open University Malaysia with another option to tackle attrition issues affecting it currently. As at September 2009, Open University Malaysia has 39218 active paying students. In July 2010, there are 31896 active students including new students who enrolled in January and May

2010. 5675 learners have graduated during the 8th Convocation in June 2010. (Source: OUM Today, Issues 71, June, 2010). Thus the decrease in the student population is more than the increase in new learners due to graduation, deferment and dropout.

Since Open University Malaysia has developed the state-of-the-art Learning Management System to support learning and provide services to its learners, this same tool can be converted into an Online Community if it is managed well. The results of this research will definitely bring a lot of benefits to Open University Malaysia in aspect of student retention. What it needs is to appoint an Online Community Manager to manage all aspects of engaging learners using the Learning Management System by activating the Learner-Learner, Learner-Tutor, Learner-Content and Learner-Staff interaction in the Learning Management System. The study will assist Open University Malaysia to identify factors that affect the Engagement of learners in the Online Community and take corrective actions to tackle them.

Students, who are engaged, learn better according to the Theory of Engagement (Kearsley & Shneiderman, 1999). They will feel satisfied and motivated and therefore will continue to remain in their programmes. The more referrals Open University Malaysia have, the more cost can be reduced in terms of recruitment of new students.

Having an Online Community that can engage students over a longer period will help Open University Malaysia to become more competitive compared with its competitors, from among local public and private universities and also from other foreign universities.

Increase in retention can also help the university to increase its revenue and profitability. Lower attrition rate reflects a better image to the university in terms of quality of services provided and quality of teaching faculty.

1.6.2 In terms of Significant to the Education Industry

Attrition not only happens at Open University Malaysia. It also happened in other universities, both traditional and non-traditional. Generally, non-traditional universities have higher attrition rate compared with traditional universities. This research will provide an opportunity for universities to improve on their retention rates as what they need is to invest in setting up a Learning Management System or any online communication tool, which capitalised on Web 2.0.

Most universities have a website with education portal to provide information to their learners. This portal can be modified to enable interaction to take place by creating an online discussion forum which must be managed by a dedicated person on Online Community Manager.

Creating an Online Community does not need any exclusive software. The system works in any platform which has Internet connection and Web 2.0 capability. Thus this research provides a reference to the education industry which uses Learning Management system to support learning. It is not something new as other industries have already utilised Online Community to attract customers and engaged them as long as possible and then turned them into loyal customers and referrals. As

competition becomes more intense each day, institutions that have innovative ideas in developing an Online Community will have a competitive advantage.

According to Murphy and Murphy (2002), acquiring new customers can cost five times more than satisfying and retaining current customers. They also opined that a two percent increase in customer retention has the same effect as cutting cost by 10 percent.

Retaining customers is important not only because it helps boost up the image of an organisation but also it can lower the amortised cost as the cost of acquisition occurs only at the beginning. According to Buchanan and Gilles (1990), long term customers tend to be less inclined to switch and they may also initiate free word of mouth promotions and referrals for the organisation.

1.6.3 In terms of Significant to Students

Most students who take up distance learning are working adults who are unable to leave their job or family to pursue their dream goals. Thus distance education provides a second opportunity to them. However, distance education today uses Information and Communication Technology such as Internet and Learning Management System to provide learning and services support. This provides a challenge to the students.

With intense competition among distance education providers, various innovative approaches will be developed to assist these students to complete their studies. Thus

students who have self efficacy especially will not feel lonely due to their remoteness when faced with problems. The Online Community compensates the lack of face-to-face contact and helps students to complete their programmes just like other students through their engagement with their friends, tutors and management staff. They have the comfort of studying anytime and anyplace without having to travel. The Online Community will become a better option compared with learning during the 70s or even 80s before the advent of Internet. Self learning without Internet support can really make students feel lonely and isolated from other students and their tutors.

This research will help create the pathway for future research to look into ways in measuring the intensity of the Online Community so that it can be used as an early warning system to alert institutions the possibility of attrition.

1.7 Scope of the Research

The focus of this research is on the impact of Online Community on retention of open and distance learners. The Online Community was formed as a result of the continuous participation of learners, tutors and management staff of Open University Malaysia in the Learning Management System set up to support learning and administrative matters. Online Community can also be formed through the use of social network tools by some tutors and management staff to support learners in a creative way. Higher interaction in the Online Community can help reduce the feelings of isolation of learners and this can increase their level of Engagement, Sense of Community, Satisfaction, Intrinsic Motivation and Commitment to stay.

Open University Malaysia was chosen for the research setting because it has one of the most matured and developed Learning Management System being the oldest non-traditional university in Malaysia. It is also because it uses the blended learning pedagogy where the Learning Management System is the fulcrum that supports learning and administrative matter. Open University Malaysia has produced more than 25,000 graduates compared to the other two non-traditional universities; Asia e-University and Wawasan Open University, which have yet to produce any graduate to date. The study used the samples obtained from undergraduate learners of Open University Malaysia, which has a total student population of 39218 students as at August 2009.

Thus the scope of this research is to investigate empirically on 39218 undergraduate learners of Open University Malaysia regardless of the programmes they take. However, attempts were also made to solicit responses from a few other traditional local and overseas universities but the response received was poor. Thus, these responses were not included in the research. Moreover, it is also difficult to make comparison in the measurement of the variables between a university with another university because of the different number of contact hours and different learning mode.

1.8 Limitations of the Study

This research has several limitations due to circumstances and research setting as follows:

- a) The research was limited by the constraints in collecting data from other open and distance learning universities in Malaysia. The study initially attempted to solicit response from undergraduate students from Wawasan Open University, Asia e-University, University Tun Abdul Razak, Open University Malaysia and some of the selected traditional universities in Malaysia that have used the Learning Management System to provide learning and services support. Unfortunately Wawasan Open University and Asia e-University are new at the time the research was conducted. University Tun Abdul Razak though started as a non-traditional university has since become a traditional university offering full time studies. Thus the research samples are drawn from undergraduate students from Open University Malaysia only.
- b) Samples from non-traditional universities of other countries were not considered in the research because of the difference in level of Information and Computer Technology literacy skills between these learners and learners from Malaysia. However, by excluding those samples, it does not make this research inferior because the Learning Management System used at Open University Malaysia may not be the same as the Learning Management System used at other universities. Also, the retention initiatives carried out at Open University Malaysia and other universities may not be the same. Taking samples from different universities for the purpose of this research will render it as if comparing an apple to an orange.
- c) The research was also limited by the data collected from samples among learners within one semester only (September 2009 semester). This is to avoid learners from responding to the questionnaire more than once if the questionnaire were

administered continuously every semester. However, the research will produce more meaningful results if longitudinal research is carried out but the methodology of data collection has to be changed.

- d) The research did not take into consideration participants' actual rate of participation and involvement in the Learning Management System and how it correlates with their tutors' rate of participation.
- e) Also, the research did not include learners' Cumulative Grade Point Average, availability of Internet access, time spent by learners' in the Learning Management System, employer's and family support, which may also influence their satisfaction using the Learning Management System.
- f) At the time the research was conducted, participants should also be asked on the subjects and courses they are taking because technical subjects such as engineering and mathematics, which are considered difficult subjects by many, may have impact on their participation behavioural pattern in the Learning Management System.
- g) The researcher only made an assumption that all learners have participated in the online community and that the participants in the research all have equal Information and Computer Technology literacy skills and Internet access.

- h) Samples were also not obtained from learners who have graduated and learners who have actually dropped out, due to difficulty in getting their response even though attempts were made during pilot study.
- i) The research was also limited by the method of data collection where survey questionnaire was used. Respondents may not be providing actual response and may be affected by time constraint and other factors during data collection in the class. Interview, if conducted will be able to get direct feedback from the respondents. However, this approach was not used due to time constraints and cost involved.

Despite all the above limitations, the findings of this research will not be affected due to the large sample size of 1116 respondents received for this survey. It is still useful for future researchers to follow up on the importance of Online Community as a tool to increase learners' retention. This method has been used by many organisations in other industries to attract and retain customers by capitalising on the popular social networking tools such Facebook, MySpace, Blogs and Twitters. Unfortunately, educational institutions have not been capitalising on the Learning Management System to be turned into an Online Community to reduce learners' feelings of isolation and increase their Engagement.

1.9 Definition of terms used

The following are definitions and explanations of the terms used in this research paper which will help in understanding the research better:

1.9.1 Online Community

According to Young and Levine (2000), a community involves people getting together and getting to know one another. When this takes place over a computer network such as the Internet, it is known as Online Community. In the Online Community, a group of people participate in an asynchronous discussion over the Internet. According to them, among the reasons why people participate in Online Community are to learn or express their opinions, to share experiences, to make friends, to get involved in a group, to live in a fantasy virtual life where no one will know their identities and also to look for information.

According to Sloman and Reynolds (2003), e-learning community is a subset of Online Community where a group of learners communicate and share knowledge with each other with the assistance of an e-moderator. Conrad and Donaldson (2004) opined that collaborative acquisition of knowledge through such e-learning community is one key success in creating an online learning environment.

According to Palloff and Pratt (2003), an online community is made up of the following:

- a) People – students, faculty and staff involved in the online course
- b) Shared purpose – coming together to take up online course, sharing of information, interest and resources
- c) Guidelines – create structure of online course by providing ground rules for online interaction and participation

- d) Technology – serves as a vehicle where course is delivered and a place where everyone can meet
- e) Collaborative learning – promotes student-student and student-faculty interaction and support constructed meaning and knowledge creation and
- f) Reflective practice – promotes transformative learning

1.9.2 Attrition, Persistence and Retention

Attrition has been defined differently by different institutions of higher learning and by different researchers. Attrition has been closely connected to dropout, learner persistency in their programmes, retention and graduation.

According to Morgan and Tam (1999), attrition in distance education is a complex issue affected by numerous variables. Attrition may mean different things to different educational institutions. Attrition rate or dropout rate or non-completion rate refers to the number of learners who have chosen to discontinue voluntarily from a course of programme relative to the total number of enrolment in that programme offered by an institution. Attrition also refers to the number of learners who have not completed or not graduated from their programmes within the stipulated period of time. Attrition can also mean the number of learners enrolled in a course, but do not fulfil all the course requirements for certification or graduation nor complete the programme (Henke & Russum, 2000).

According to Martinez (2002 & 2003), attrition refers to a decrease in the number of learners or learners engaged in some course of study. Attrition takes place when a

learner leaves the course of study. In contrast, there are institutions which define dropout as learners who never return and never complete the course of study. There are also learners who will return at a later time to finish the unfinished job.

Retention is the opposite of attrition. Martinez (2002 & 2003) defines retention as the number of learners who progress from one part of an educational programme to the next. Kerka (1995 & 1996) defines retention as the ability to keep learners in their programmes until they achieve their goals. Persistency, the results of retention management, according to Martinez (2002 & 2003), refers to the act of continuing toward an educational goal. According to Berger and Lyon (2005), retention refers to the ability of an institution to retain a learner from the point of admission through graduation, most often related to a single institution as opposed to transfer.

According to Hagedorn (2005), there are four types of retention; institutional, system, academic discipline and by course. Of these, the most widely used method employed by most institutions according to Roberts and Styron (2010) is the institutional retention. Institutional retention is calculated based on the percentage of students who return to the institution in which the student is enrolled.

At Open University Malaysia, there are two ways in which attrition is calculated; cumulative over the past eight years and semester-to-semester calculation as described by Latif, Sungsi and Bahroom (2009). The cumulative attrition is the proportion of total active learners taking services since August 2001 (when Open University Malaysia started its operations) over the total enrolment to date. For the purpose of this research, attrition refers to number of learners who have quit or unable to

complete their programmes within a stipulated period of time as compared to total number of active learners.

Learners who are generally satisfied show some forms of persistency in their studies (Keri, 2002). Persistency, according to Tinto (2002), is largely the results of what occurs to a learner following entry. He listed five conditions that can promote persistency; expectation, advice, support, involvement and learning.

1.9.3 Feelings of Isolation

The feelings of isolation have been identified by many researchers such as Palloff and Pratt (1999), Morgan and Tam (1999), Reisman (2003) and Rovai (2002) as one of the reasons why students dropped out of their programmes.

According to Dueber and Misanchuk (2001) the feelings of isolation happened because students felt cut-off from in-class as well as serendipitous encounters with their classmates, peers, and instructors lose the sense that they are part of a community and the feeling that they belong to something.

The feelings of isolation are associated with being lonely, where people experience a strong sense of emptiness and solitude. It is about the feelings of being unwanted and unimportant. People with such feelings may find it hard to form a strong interpersonal relationship with others in the community or society in which they belong. The feelings of isolation happen when the yearning for love of companionship are

unfulfilled or cannot be achieved and this often leads to emotions such as rejection, despair, and low esteem.

Feelings of isolation are also the result of learners not engaged in the educational environment and have lesser contact with other learners, their tutors, management staff and contents.

1.9.4 Engagement, Involvement and Participation

According to Lim (2004), engagement is a key component of learning where it enables and encourages learners to interact with the learning materials, with their instructors and with one another. It is about learners paying close attention on certain task, deeply involved in the subject matter and their learning. Shin and Chan (2004) suggested that engagement refers to the frequency with which participants logged into the course website. Miller, Rainer and Corley (2003) define engagement as the amount of time students spent on the Web pages available for the course in question.

However, Ingram (2005) argued that participation in an online discussion forum or looking at a page of instructional materials, where indeed students spent time to even read it, cannot tell us whether these students are engaged in learning. Ormrod (2004) opined that engagement involves active participation of learners in the discussion and online forum and collaborative learning with their teachers and other learners.

According to Forum One (2008), engagement in social network encompasses not only logins to the site, but other activities such as digging/burying stories, submitting

content and engaging in discussions on specific stories. Engagement of participants here includes:

- a) Amount of activity on site: page views, logins, searches, feature usage
- b) Number and type of content items created: discussion posts, tags, shared content, etc.
- c) Number of connections / relationships created: friends added to network, or inferred via frequent discussion exchanges
- d) Time on site: Total time per month
- e) Frequency of visits: / per month
- f) Recommendations: Members referring new community members, passing along community content outside of community, blogging about promoting community

1.9.5 Traditional and Non-Traditional Learners

Shane (2000) defined traditional learners as learners between the ages of 17 and 23, attending college on a full-time basis immediately following high school, and living on campus or near campus.

According to Bean and Metzner (1985), non-traditional learners are learners who have at least one of the following characteristics; older than 24 years of age, do not live in a campus residence, or are part-time learners. They added that these students are not greatly influenced by the social environment of the institution and are chiefly concerned with the institution's academic offerings.

These learners, according to Waits and Lewis (2003) are mostly studying through distance education where education is delivered to remote locations via audio, video, or through computer-based technologies such as synchronous chats or asynchronous discussion boards. Allen and Seaman (2007) noted that non-traditional students may take their courses via online, where the content is delivered via the internet with no or very limited face-to-face contact.

1.9.6 At-Risk Group

At Open University Malaysia, At-Risk learners are defined as learners whose Cumulative Grade Point Average is below 2.0 out of a total possible of 4.0 for more than two semesters. According to Latif, Sungsi and Bahroom (2009), this is the benchmark set for learners whose examination scores are lower than passing mark of 50 percent for each subject.

1.9.7 Sense of Community

McMillan and Chavis (1986) define Sense of Community as a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that member's needs will be met through their commitment to be together. Sense of Community or Sense of Classroom Community is the sense of interaction between learners, whose members are mutually interdependence and have sense of trust and shared goals and values (Rovai, 2002).

1.9.8 Satisfaction

Satisfaction among online learners refers to their feeling of accomplishment, contentment, fulfilment of their desire towards the services provided by the staff and faculty members of the learning providers or gratification towards the facilities provided in meeting their needs or exceeding their expectations. Thus providing services to online learners is part of the marketing process where marketing is defined by many including Kotler and Armstrong (2003) and The Chartered Institute of Marketing (2010) as the process of satisfying customers' needs and wants.

According to Levesque and McDougall (1996), satisfaction is an overall customer attitude towards a service provider. Zineldin (2000) define satisfaction as an emotional reaction to the difference between what customers anticipate and what they receive regarding the fulfilment of some needs, goals or desire.

Eriksson and Vaghult (2000) opined that satisfaction increases customer retention and according to them customer retention depends on the substance of the relationship between parties involved.

According to Astin (1993), learners' satisfaction centres on two areas; their undergraduate experience and their college environment. These involved specifics of personal experiences, curriculum, college administration, facilities, quality of instructions, and contacts with faculty, degree of faculty interest in learners, learner's relationships with administration, and the degree of institutional priority given to

issues such as diversity, social change, resource acquisition, and enhancement of institutional reputation.

Dziuban et al. (2007) suggested that there are four underlying factors that can satisfy online learners' satisfaction. These include student-faculty interaction, active learning, time on task and cooperation among students. According to him, engaged students are satisfied students. Thus a high sense of community as a result of students appreciating interaction and the opportunities that enable them to communicate actively will result in higher level of satisfaction.

1.9.9 Intrinsic Motivation

Motivation according to Luthans (1998) is a process that starts with a physiological deficiency or need that activates behaviour or a drive that is aimed at certain goal incentive. Motivation is something intangible that has to do with desire, needs, wants, aims, goals and incentives.

According to Deci and Ryan (2000) in their Self-Determination Theory, the innate psychological needs of human for competence, relatedness and autonomy, when satisfied, leads to enhanced motivation. Learners especially working adults are highly motivated because of their desire to acquire new knowledge and aims of getting an academic recognition. There are two types of motivation - extrinsic and intrinsic.

Extrinsic motivation according to Vallerand and Bissonette (1992), describes the motivation in which people engage in behaviour for the rewards they perceived will

be received upon goal attainment. Intrinsic motivation describes the motivation that leads people to engage in activities for themselves, and the pleasure and satisfaction derived from their participation (Deci & Ryan, 2000).

1.9.10 Commitment to Stay

Commitment refers to the continuing participation of a learner in the institution of higher learning. It is about the emotional attachment to, identification with, and involvement with the institution. According to Meyer and Allen (1991 & 1997), an individual commitment towards an organisation is both behavioural and attitudinal. They proposed the Three-Commitment Model which enlists the three main components that affect commitment; Affective Commitment, Continuance Commitment and Normative Commitment.

- a) Affective Commitment refers to the psychological attachment to the university.
- b) Continuance Commitment refers to the costs associated with leaving the university.
- c) Normative Commitment refers to the perceived obligation to remain with the university.

1.9.11 Academic Integration

According to Draper (2003), academic integration includes learners' academic performance, identification of academic norms and values, academic self esteem and identification of their roles as learners

1.9.12 Social Integration

Social integration includes relationship with other learners, contact with peers, academic and administrative staff, participation in co-curriculum activities and attitude towards the college or university. According to Evans (1999), Tinto's research emphasised much on the role of institutions particularly the interaction between the learners and the institution's academic and social systems and that learners' departure was found to be primarily related to isolation and incongruence.

1.9.13 Organisation Integration

Organisation Integration according to Dosi et al (1998) is a set of ongoing relationships that socialises participants in a complex division of labour to apply their skills and efforts to the achievement of common goals. The focus of organisation integration according to them is on the social process that achieves cooperation among individuals and groups of individuals. The outcome of such integration is the organisation competitive advantage to respond more quickly and effectively to competition and changes in the marketplace.

Organisation integration in an open and distance learning university includes all activities involving people in the university and the academics including tutors in terms of providing support, information, tools, and selection and training of tutors. As tutors act as front liners during course delivery for the university, they are also expected by learners to help solve their problems such as time table, handling the Learning Management System, problems with their course materials, and

examinations. As such well-informed tutors, supported by timely information from the management, will be able to perform their tasks more meaningfully and successfully. They are also motivated to help their learners and this will result in higher satisfaction.

Organisation integration provides the capability to learn as an enterprise and the potential to innovate in market competition. It has been practiced by many Japanese firms which have succeeded in giving them the competitive edge over their American competitors in the US especially in the automobile industry to react and respond quickly to market needs and changes.

1.10 Organisation of the Thesis

This thesis has been organised into five chapters as follows:

Chapter 1 includes the introduction, statement of the problem, objectives of the study, the research questions, significance of the study, scope of the research, limitations of the study and definition of terms used.

Chapter 2 provides a review of the literature. The chapter includes research on the different attrition models, retention theories and models, factors affecting both traditional and non-traditional learners, feeling of isolation and student engagement, theoretical framework and conceptual model used in the research.

Chapter 3 provides a review of research procedures. The chapter includes the research design, sampling, research questions and hypotheses, description of the case, participants, instrument used, pilot test, factor analysis, data collection methods, and data analysis.

Chapter 4 provides the findings of the study. The chapter includes an analysis of data collected using different statistical tools.

Chapter 5 provides a summary of major findings from the study and discussions related to emerging themes. The chapter concludes with general recommendations and actions for future research.

1.11 Summary of Chapter 1

Demand for tertiary education from adult learners in Malaysia has increased. With the support of the Malaysian government, more and more universities, both private and public have started to offer distance education to these learners. Open University Malaysia was the first open and distance learning university in Malaysia. Other universities that offer almost similar learning mode include University Tun Abdul Razak, Wawasan Open University and Asia e-University.

Despite the strong demand for tertiary education from among working adults, these universities also experienced a high attrition rate and the rate can be alarming and may affect not only the revenue of the universities but also their image in terms of quality services and administrative support and teaching faculty.

Various retention initiatives including setting up the Learning Management System to provide better learning and services support has been taken by Open University Malaysia. Unfortunately its attrition rate remains high. Attrition is a complex phenomenon and the reasons are many. However, one reason cited that needs attention is the feelings of isolation among open and distance learners.

Thus this research focused on using Online Community developed by the continuous participation of learners, tutors and management staff in the Learning Management System and other social networking tools over a period of time to help reduce the Feelings of Isolation and increase connectedness of the learners of Open University Malaysia. Reducing the feelings of isolation and increase Engagement using Online Community can help increase retention if it is managed well.

The conceptual model proposed for this study posited that learners' Sense of Community, Satisfaction, and Intrinsic Motivation are mediating factors of Engagement, on Commitment to stay in their programmes.

The scope of the research is limited by the samples used in this research, which were obtained from among undergraduate learners of Open University Malaysia. The results of this research contribute to the body of knowledge in terms of benefits for Open University Malaysia, the education industry and e-learners. However, the research has several limitations due to the samples collected from only one university and also several pertinent factors such as learners' academic achievement, family and employers support, were not included in the questionnaire.

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